EUROPEAN POLYMER JOURNAL

Founding Editors: *J. C. Bevington*
M. Stacey

Editor-in-Chief: *J. V. Dawkins*

Volume Contents and Author Index

VOLUME 30

1994

PERGAMON

EUROPEAN POLYMER JOURNAL

Founding Editors

Professor J. C. BEVINGTON
Professor M. STACEY, F.R.S.

Editor-in-Chief

Professor J. V. DAWKINS: Department of Chemistry, The University, Loughborough, Leicestershire LE11 3TU, England

Honorary Regional Editors

S. BYWATER: Division of Applied Chemistry, The National Research Council, Ottawa 7, Canada

H. CHERADAME: L.P.C.B., C.N.R.S., B.P. 28, 94320 Thiais, France

P. CORRADINI: Dipartimento di Chimica, Università di Napoli, via Mezzocannone 4, 80134 Napoli, Italy

H. RINGSDORF: Institut für Organische Chemie, Johannes Gutenberg-Universität, Johann-Joachim-Becher-weg 18–20, 6500 Mainz, Germany

Honorary Editorial Advisory Board

G. G. CAMERON—Aberdeen, Scotland
J. R. EBDON—Lancaster, England
G. GEUSKENS—Brussels, Belgium
D. J. HOURSTON—Loughborough, England
A. D. JENKINS—Brighton, England
F. E. KARASZ—Amherst, MA, U.S.A.
R. S. LEHRLE—Birmingham, England
J. R. MACCALLUM—St Andrews, Scotland
D. C. PEPPER—Dublin, Ireland
C. PRICE—Manchester, England
J. ŠEBENDA—Prague, Czech Republic
D. C. SHERRINGTON—Glasgow, Scotland
C. I. SIMIONESCU—Bucharest, Romania
F. TÜDŐS—Budapest, Hungary
O. VOGL—New York, NY, U.S.A.
A. ZILKHA—Jerusalem, Israel

Published Monthly

Copyright © 1994 Elsevier Science Ltd

Publishing Office
Elsevier Science Ltd, Bampfylde Street, Exeter EX1 2AH, England
[*Tel.* Exeter (01392) 51558; *Fax* (01392) 425370]

Production Editor: Alison Seedhouse

Subscription and Advertising Offices
North America—Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A.
Rest of the World—Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, England
[*Tel.* Oxford (01865) 843000; *Fax* (01865) 843010]

Subscription Rates
Annual Institutional Subscription Rates 1995: North, Central and South America, US$1267.00; Rest of the World, £850.00. Sterling prices exclude VAT. Non-VAT registered customers in the European Community will be charged the appropriate VAT in addition to the price listed. Prices include postage and insurance and are subject to change without notice.

Back Issues
Back issues of all previously published volumes, in both hard copy and microform, are available direct from Elsevier Science offices.

Second class postage paid at RAHWAY, NJ. Postmaster send address corrections to *European Polymer Journal*, c/o Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A.

LIST OF CONTENTS

NUMBER 1

S. H. El-Hamouly	1	Azeotropy in terpolymerizations
G. A. H. Nooijen	11	On the importance of diffusion of cocatalyst molecules through heterogeneous Ziegler/Natta catalysts
B. T. Poh and K. S. Lee	17	FTIR study of thermal oxidation of ENR
M. M. Azab	25	Terpolymerizations of *p*-acryloyloxy-tri-n-butyltin benzoate with alkyl acrylates or vinyl acetate and *n*-vinyl-2-pyrrolidone
H. J. Mencer and Z. Gomzi	33	Swelling kinetics of polymer–solvent systems
R. Sánchez, C. Hernández, G. Jalsovszky and G. Czira	37	Thermal degradation of furfuraldehyde resins. Pyrolysis–gas chromatography–mass spectrometry and fourier transform infrared
R. Sánchez, C. Hernández and G. Keresztury	43	Structural analysis of acid catalysed furfuraldehyde resins by thermal degradation techniques
R. Sánchez and C. Hernández	51	Physico-chemical characterization of furfuraldehyde resins as adsorbents
S. Sankarapapavinasam	55	Kinetics and mechanism of electro-oxidative polymerization of *m*-cresol on Pt electrode catalysed by trimethylamine
Beena Mathew and V. N. Rajasekharan Pillai	61	Crosslinked polystyrene-supported dithiocarbamates as metal complexing agents
I. M. Huxham, L. Tetley and D. C. Sherrington	67	Electron microscopy study of styrene–divinylbenzene copolymers
Yu Xing Peng, Hung Anh Nguyen, Anne Macedo et Hervé Cheradame	69	Polymérisation electrophile du 1,3-pentadiène amorcée par le triflate d'aluminium
C. Descours-Michallet, C. Bosso et Hervé Cheradame	79	Réaction modele de coamorçage en polymérisation cationique: analyses des produits de la réaction du $TiCl_4$ avec le 2-isothiocyano-2,4,4-triméthylpentane
B. Boutevin et F. Malek	93	Résine acétylante: synthèse, polymérisation et etude de sélectivité
Yulin Deng, Colin Price and Colin Booth	103	Preparation and properties of block copolymers with two stat-copoly(oxyethylene/oxypropylene) blocks
S. Nagarajan and K. S. V. Srinivasan	113	Block copolymerization initiated by Ce(IV)–poly(ethylene glycol) redox system—kinetics and characterization
Catherine L. Winzor, Zdeněk Mrázek, Mitchell A. Winnik, Melvin D. Croucher and Gérard Riess	121	Stabilization of dispersion polymerization by poly(styrene-b-ethylene oxide) copolymers
Jean Duhamel, Yariv Khaykin, Yong Zhong Hu, Mitchell A. Winnik, Sylvie Boileau and Françoise Mechin	129	End-to-end cyclization of a pyrene end-capped poly(bisphenol AF-diethylene glycol carbonate) in solution
Minoru Nagata, Tsuyoshi Kiyotsukuri, Daisuke Kohmoto and Naoto Tsutsumi	135	Preparation and properties of nylon-6/lysine composite films

NUMBER 2

S. M. Low, S. Y. Lee and S. H. Goh	139	Miscible blends of poly(*N*,*N*-dimethylacrylamide) with five halogen-containing polymethacrylates
J. R. Allan, P. C. Beaumont, B. R. Carson, G. H. W. Milburn and I. J. Wood	145	A study of the performance of some first row transition metal complexes of nonylamine as colourants for poly(vinyl chloride) and polyethylene
Candan Erbil, Belkıs Ustamehmetoğlu, Gülay Uzelli and A. Sezai Saraç	149	Conductometric determination of the end group ionization in acrylamide and acrylonitrile polymers initiated by carboxylic acids
Kathleen Jeffrey and Richard A. Pethrick	153	Influence of chemical structure on free volume in epoxy resins: a positron annihilation study
W. Borchard	159	Phase equilibria in polymer/solvent systems IV. Temperature dependence of the osmotic equilibrium on phase transition of a permeable component
Djelloul Messadi et Abd-El-Hak Gheid	167	Etude des transferts de matière entre un plastifiant dispersé dans un disque de PVC et des liquides alimentaires
Z. Hloušková, J. Tiňo and I. Chodák	175	Study of PE-based composites by the spin-probe method
Grant T. D. Shouldice, Gerald A. Vandezande and Alfred Rudin	179	Practical aspects of the emulsifier-free emulsion polymerization of styrene
A. Miller	185	The reactivities of nuclear-substituted phenyl acrylates in radical copolymerization with methyl methacrylate
Christopher F. C. Porter and David Phillips	189	Energy transfer in fluid solutions of poly(styrene), both labelled and unlabelled, and poly(2-vinylnaphthalene)
B. Lánská	197	Thermo-oxidation of lactam-based polyamides with carboxylic end-groups. Decomposition of 6-hydroperoxy-6-hexanelactam in the presence of carboxylic acids
C. B. Yang, C. C. Hsu, Y. S. Park and H. F. Shurvell	205	Infrared characterization of $MgCl_2$ supported Ziegler–Natta catalysts with monoester and diester as a modifier
Ferenc Horkay, Anne-Marie Hecht, Halina B. Stanley and Erik Geissler	215	Scattering in polymer solutions: determination of osmotic properties in the concentrated regime
Gilles Tersac, Mohamed Rakib, Moncef Stambouli, Juergen Deuerlein et Gérard Durand	221	Purification, par dissolution sélective, de déchets d'objets usagés broyés en polyéthylènetéréphtalate, pollués notamment par du polychlorure de vinyle
Jiaping Lin, Herong Wu and Shijin Li	231	Compatibility of rodlike polymers
Zeng Hanmin, Zhang Zhiyi, Peng Weizou and Pu Tiayou	235	Transcrystalline structure of PEEK
C. Bonnans-Plaisance, G. Levesque et A. Midrak	239	Polymérisation du méthylthiirane par les sels d'ammonium quaternaire des (di)thioacides: étude cinétique dans le THF
Bibekananda Das, Tanmoy Gangopadhyay and Sudipta Sinha	245	Studies on polyester–poly(ethyl acrylate-co-styrene) interpenetrating polymer networks

R. Paladhi and R. P. Singh	251	Ultrasonic and rheological investigations on interacting blend solutions of poly(acrylic acid) with poly(vinyl pyrrolidone) or poly(vinyl alcohol)
M. A. El-Shahawy and M. M. Elkholy	259	Dielectric properties of cobalt-doped poly(vinyl alcohol)
M. G. Kontominas, R. Gavara and J. R. Giacin	265	The adsorption of hydrocarbons on polystyrene by inverse gas chromatography: infinite dilution concentration region
M. G. Kontominas, R. Gavara and J. R. Giacin	271	Gas–solid chromatographic study of polymer surfaces: adsorption on polystyrene
Corrigendum	279	

NUMBER 3

Hans R. Kricheldorf and Claas Jürgens	281	Polyanhydrides—4. Poly(ester-anhydride)s derived from terephthalic acid and bisphenol-A
Futian Liu, Xianda Yu and Shuben Li	289	Preparation of polymers with pendant viologen groups and their application to electron transfer reactions in heterophases
J. Penelle, V. Mayné and C. Wynants	295	Synthesis and 500 MHz-NMR characterization of poly(2-trimethylsiloxy)butadiene obtained by free radical and cationic polymerizations
D. Graebling, A. Benkira, Y. Gallot and R. Mulier	301	Dynamic viscoelastic behaviour of polymer blends in the melt—experimental results for PDMS/POE-DO, PS/PMMA and PS/PEMA blends
Mariana Pinteală, Valeria Harabagiu, Cornelia Cotzur and Bogdan C. Simionescu	309	Functional polysiloxanes—1. Polysiloxanes containing chloromethylphenethyl groups
E. A. Abdel-Razik	313	Homogeneous grafting of dichlorodimethylsilane onto ethyl cellulose
Romas Mažeika, Juozas V. Gražulevičius, Rimtautas Kavaliūnas and Nijolė Kreivėnienė	319	Synthesis and properties of co-oligomers of carbazolyl oxiranes and tetrahydrofuran
Wei Li, Xiaoming Jin, Guang Li and Bingzheng Jiang	325	Phase behavior in thermotropic liquid crystalline polymer and polyarylethersulfone blends
C. N. Caşcaval, D. Roşu and F. Mustaţă	329	Synthesis and characterization of some *para*-nonylphenol formaldehyde resins
M. Hassanein, F. I. Abdel-Hay and T. El-Hefnawy El-Esawy	335	Autoxidation of 2,6-di-t-butylphenol catalyzed by cobalt (II) Schiff-base complex bound to cationic latex
D. Langevin, J. Grenet and J. M. Saiter	339	Moisture sorption in PET. Influence on the thermokinetic parameters
T. Sato, Y. Hirose, M. Seno, H. Tanaka, N. Uchiumi and M. Matsumoto	347	Kinetic and ESR studies on radical polymerization. Radical polymerization of diisopropyl itaconate
Tae Oan Ahn, Jongchan Lee, Han Mo Jeong and Kilwon Cho	353	Synthesis and application of polyarylate–poly(methyl methacrylate) block copolymer as compatibilizer for polyarylate/poly(vinylidene fluoride) blend

Veronika Strehmel and Tom Scherzer	361	Structural investigation of epoxy amine networks by mid- and near-infrared spectroscopy
Leila L. Y. Visconte, Cristina T. Andrade and Chiaki Azuma	369	Effect of spacer length and sodium concentration on the reactivity of photosensitive copolymers
Francesco Minto, Marco Scoponi, Mario Gleria, Fiorella Pradella and Pietro Bortolus	375	Grafting reactions onto poly(organophosphazenes)—III. Light-induced graft copolymerization of poly-*N,N'*-dimethylacrylamide onto mobile-hydrogen-containing phosphazene polymers
R. Stanković, O. Pavlović, M. Vojnović and S. Jovanović	385	The effects of preparation conditions on the properties of electrochemically synthesized thick films of polypyrrole
K. Adjidjonou and C. Caze	395	Asymmetric reduction of acetophenone with chiral polymeric reagents: supported sodium borohydride on chiral quaternary ammonium binded to a polymer
Marc J. M. Abadie, Angèlique Parfait et Michel Rouby	399	Etude de la photoréactivité de composites dentaires—I. Effet de la température et de l'oxygène
G. O. Shonaike, S. Yamaguchi, M. Ohta, H. Hamada, Z. Maekawa, M. Nakamichi and W. Kosaka	413	Studies of blends of poly(phenylene sulphide) and a liquid crystalline polymer—1. Compatibility and mechanical properties

NUMBER 4

P. K. Sengupta and A. R. Pramanik	421	Grafting of vinyl polymers onto carbon black using *N*-bromophthalimide as thermal initiator and characterization of the grafted product
P. E. M. Allen, A. B. Clayton and D. R. G. Williams	427	Dynamic-mechanical properties and cross-polarized, proton-enhanced, magic-angle spinning ^{13}C-NMR time constants of urethane acrylates—2. Copolymer networks
Jacques Lacoste, Claudie Adam, Narcisse Siampiringue and Jacques Lemaire	433	Ozonization, a minor route for elastomer weathering
G. H. Tandel, S. N. Kaula, B. V. Patel and K. C. Patel	443	Synthesis and physico-chemical properties of polycyanurates derived from 2-piperidino-4,6-dichloro-s-triazine with various diols
Š. Florián, E. Lathová and P. Mach	449	Solution properties of a propylene–tetrafluoroethylene copolymer
Claudio Uliana, Pierluigi Traverso and Fernando Vigo	453	Radiochemical grafting of styrene onto polyvinylpyrrolidone
Yan Liu, Malcolm B. Huglin and Thomas P. Davis	457	Preparation and characterization of some linear copolymers as precursors to thermoplastic hydrogels
Constantinos D. Diakoumakos and John A. Mikroyannidis	465	Heat-resistant resins derived from cyano-substituted Diels–Alder polymers
N. Nugay and T. Tinçer	473	A study on blends of low and high density polyethylenes: effect of mixing time on mechanical, thermal properties and oxidative degradation

Tao Tang, Lixia Li and Baotong Huang	479	Synthesis and crystallization behavior of (PP–MA)-g-PEO
M. Camail, J. C. Maesano, A. Margaillan, J. P. Pautasso et J. L. Vernet	485	Copolymérisation de la *N* acryloyl (L) alanine avec l'acrylamide
S. H. Goh, S. Y. Lee and Christopher T. Y. Tan	489	Binary copolymerizations of furfuryl methacrylate with styrene, *p*-methylstyrene and acrylonitrile
Y. T. Yeo, S. Y. Lee and S. H. Goh	495	Miscibility of poly(cyanomethyl methacrylate) with various polymethacrylates
Pallab Banerjee, Mohan L. Digar, Sailendra N. Bhattacharyya and Broja M. Mandal	499	Novel polyaniline dispersions using poly(vinyl methyl ether) stabilizer
M. Bandiera, A. Munari, P. Manaresi and M. Pizzoli	503	Dilute solution and thermal behaviour of random poly(butylene isophthalate/terephthalate) copolymers
C. Sivriev and L. Żabski	509	Flame retarded rigid polyurethane foams by chemical modification with phosphorus- and nitrogen-containing polyols
Krzysztof Kaźmierski, Julian Chojnowski and James McVie	515	The acid-catalyzed condensation of methyl substituted model oligosiloxanes bearing silanol and ethoxysilane functions
E. T. Kang, K. G. Neoh and K. L. Tan	529	Charge transfer interactions and redox states in ring-substituted polyanilines and their complexes
Jin San Yoon, Sung Jai Maing and Hae Hong Chung	537	Isothermal foam growth in polymer matrices
M. Benelmostafa et P. Monge	545	Généralisation du modèle d'échelle
Hans R. Kricheldorf, Volker Linzer and Christoph Bruhn	549	LC-polyimides—14. Thermotropic copoly(ester-imide)s derived from *N*-(3′-hydroxyphenyl)-trimellitimide and 4-hydroxybenzoic acid or 6-hydroxy-2-naphthoic acid
U. K. Saroop, R. K. Raina and U. Taneja	557	Effects of various process variables on resin characteristics of brominated epoxy polymers

NUMBER 5

J. J. Imaz, A. Valea, M. Cortazar and I. Mondragon	561	Correlations between rheological and thermal behaviour of TGDDM/*m*-PDA epoxy systems
Ilhan Ulkem and Guneri Akovali	567	Mechanical properties of surface modified bauxite filled SBR vulcanizates—I
Wen-Yen Chiang, Wen-Chao Wu and Béla Pukánszky	573	Modification of polypropylene, blending with resole type phenol-formaldehyde resins
Paul F. Cheetham, Thomas N. Huckerby and Brian J. Tabner	581	A high-field ^{13}C-NMR study of the aqueous copolymerizations of acrylonitrile and vinyl acetate. Determination of comonomer reactivity ratios
Shingo Emi, Yasuhiro Murase and Toshio Hayashi	589	Lipoprotein lipase immobilization onto copoly-(ethylene/acrylic acid) fiber

D. Hlavatá and Z. Horák	597	WAXS and SAXS investigation of polypropylene crystalline phase in blends with high-impact polystyrene and compatibilizers
V. Yu. Baranovsky and S. Shenkov	601	Nonspecific interactions in polymer–polymer reactions—5. Reactions of macromolecular substitution in complexation between poly(methacrylic acid) and mono-substituted poly(ethylene glycol)s
Petr Kalenda	605	Apparent activation energies for curing reactions in unsaturated polyesters in the presence of ferrocene or ferrocene derivatives
Kazimiera Suchocka-Gałaś	609	The state of ion aggregation in ionomers based on copolymers of styrene and acrylic acid—II. Thermal studies
Bernard Boutevin, Jean-Marie Lusinchi, Yves Pietrasanta and Jean-Jacques Robin	615	Synthesis of butyl acrylate/methyl methacrylate diblock copolymers by coupling of two telomers
J. Lorente, G. Ellis, C. Marco, M. A. Gómez and J. G. Fatou	621	The thermal decomposition of poly[alkyl-4,4′-(terephthaloyldioxy)dibenzoate]s
C. Y. Shih, Kueir-Rarn Lee and J. Y. Lai	629	^{60}Co γ-ray irradiation modified poly(4-methyl-1-pentene) membrane for oxygenator
Michael H. Abraham, Chau My Du, Juliet P. Osei-Owusu, Panos Sakellariou and Wendel J. Shuely	635	On the prediction of polymer–probe χ and Ω values from inverse gas-chromatographic data
A. J. Amass, M. C. Perry, D. S. Riat, B. J. Tighe, E. Colclough and M. J. Stewart	641	Studies in ring-opening polymerization—XII. The ring-opening polymerization of oxetane to living polymers using a porphinato-aluminium catalyst
F. Danusso, M. Levi, G. Gianotti and S. Turri	647	Some physical properties of two homologous series of perfluoro-polyoxyalkylene oligomers
N. Jocheska et G. Petrov	653	Etude cinétique des reactions de copolymérisation de l'acrylonitrile et de l'acétate de vinyle dans un solvant mixte, initiée par $Mn(C_5H_7O_2)_2SCN$
A. Sabbahi, J. Bouzon and J. M. Vergnaud	657	Absorption–desorption history of water at 100° by polyurethane foam

NUMBER 6

Y. Benito and J. G. Rodriguez	661	Synthesis and polymerization of 4-vinylquinoline and 4-vinylpyridine with $AlEt_3$–VCl_3: influence of pyridine as donor ligand
J. R. Allan, B. R. Carson, P. C. Beaumont and S. Tavern	667	A study of the performance of hexaammine-cobalt(III) chloride and tris(2,4-pentanediono)-cobalt(III) as colouring materials for poly(vinyl chloride) and polystyrene
Jiaping Lin and Shijin Li	671	Depolarized light intensity studies on the order parameter in lyotropic liquid crystalline polymer
D. Rabelo and F. M. B. Coutinho	675	Porous structure formation and swelling properties of styrene–divinylbenzene copolymers

Päivi Aaltonen and Jukka Seppälä	683	Copolymerization of styrene and ethylene with monocyclopentadienyltitanium trichloride/methylaluminoxane catalyst. Characterization of the product
Futian Liu, Xianda Yu and Shuben Li	689	Debromination of diphenyl methane bromide by sodium dithionite using viologen polymer as electron-transfer catalyst
Omar Melad, Ali Usanmaz and Jale Hacaloğlu	693	Mass spectral analysis of poly(3-aminocrotonamide) obtained by radiation induced solid state polymerization
Neil A. Weir, Jerzy Arct, Alfredo Ceccarelli and Andrew Siren	701	Some photo-reactions of substituted poly(acrylophenones)
J. M. G. Cowie and J. H. Harris	707	Phase behaviour of blends comprising poly(butadiene-*stat*-acrylonitrile) and several chlorinated polymers
A. Chihani, F. Z. Baza et H. Mendjel	711	Contribution à la caractérisation hydrodynamique d'une membrane d'ultrafiltration
Ryszard Sojecki	725	The synergetic effect of the catalytic system tin(II) chloride + triethylenediamine in reactions of 2,4-tolylene diisocyanate with macrodiols at various temperatures
W. Kern and K. Hummel	731	Photoreactive copolymers of 4-(thiocyanatoacetyl)-phenyl methacrylate
Erik Geissler, Ferenc Horkay, Anne-Marie Hecht and Walther Burchard	735	Depolarized light scattering from semi-dilute polystyrene–carbon tetrachloride solutions
V. D. Toncheva, S. D. Ivanova and R. S. Velichkova	741	Poly(vinyl acetal)s from poly(vinyl alcohol) and 4-dimethylaminobenzaldehyde
Premamoy Ghosh, Prasanta Kumar Ganguly and Swapan Kumar Bhaduri	749	Graft copolymerization of acrylonitrile on jute using aqueous Cu^{2+}–IO_4^- combination as initiator: some key points and mechanism

NUMBER 7

Koljo Troev, Krasimir Kossev and Dimiter Tortopov	757	Functionalization of poly(propylene ether carbonate)diols
Z. Mincheva, N. Stambolieva and I. Rashkov	761	Preparation and properties of di-, tri- and poly(ethyleneglycol) esters of 2-benzoxazolon-3-yl-acetic acid
D. Eagland, N. J. Crowther and C. J. Butler	767	Complexation between polyoxyethylene and polymethacrylic acid—the importance of the molar mass of polyoxyethylene
G. S'heeren, A. Persoons, Ph. Rondou, M. Van Beylen and C. Samyn	775	Synthesis of frequency doubling nonlinear optical polymers, functionalized with aminocyano- and alkoxycyano-stilbene dyes. Second harmonic generation in corona poled thin films
A. Sanchis, R. M. Masegosa, R. G. Rubio and M. G. Prolongo	781	Glass transition temperature for blends containing poly(4-hydroxystyrene)

Jean-Pierre Tancrez, François Rietsch et José Pabiot	789	Influence de la composition et des conditions de sollicitation sur le comportement à la rupture de composites polypropylene-fibres de verre moules par injection
Jean-Pierre Tancrez, François Rietsch et José Pabiot	803	Caracterisation des longueurs de fibres dans différents types de composites polypropylene-fibres de verre courtes—1. Methodologie, étude des materiaux avant injection
X. B. Chen, J. Devaux, J-P. Issi and D. Billaud	809	The stability of polypyrrole electrical conductivity
Jean-Marie Bessière, Bernard Boutevin et Olivier Loubet	813	Détermination des paramètres cinétiques et thermodynamiques des amorceurs de polymérisation radicalaire de type azoïque par enthalpimétrie différentielle en mode isotherme
Kazimiera Suchocka-Gałaś	821	A far-infrared study of ionic interactions in poly(styrene acrylic acid) ionomers
Masaharu Miyajima, Masaru Yoshida, Hiroshi Sato, Hideki Omichi, Ryoichi Katakai and William I. Higuchi	827	*In vitro* release of 9-β-D-arabinofuranosyladenine from thermo-responsive copoly(acryloyl-L-proline methyl ester/styrene) gels
Juin-Yih Lai, Ming-June Liu and Shih-Hsiung Chen	833	Polycarbonate/(DMF/metal salt) complex membrane prepared via a wet phase inversion method for oxygen enrichment from air
M. M. Fares, J. Hacaloglu and S. Suzer	845	Characterization of degradation products of polyethylene oxide by pyrolysis mass spectrometry
Ramiro Guerrero Santos, Philippe R. Chaumont, Jean E. Herz and Gerard J. Beinert	851	Radical polymerization of styrene initiated by benzopinacolates: kinetics and comments concerning the reaction mechanism
Erratum	I	

NUMBER 8

Cristina-Doina Vlad, Ig. C. Poinescu and Maria Barbu	863	Behaviour of porous crosslinked poly(ethylene dimethacrylate esters)
Barbara Ostrowska-Gumkowska and Jadwiga Ostrowska-Czubenko	869	Property–structure relationships in partially sulphonated poly(ethylene terephthalate)—1. Infrared studies
Barbara Ostrowska-Gumkowska	875	Property–structure relationships in partially sulphonated poly(ethylene terephthalate)—2. Thermal studies
Sunny Kuriakose and V. N. Rajasekharan Pillai	881	Benzoin condensation in crosslinked polymer matrices: polymeric analogues of α-hydroxy ketones
Moriyuki Sato, Takashi Nakano and Ken-ichi Mukaida	885	New polymethacrylates having a carbonate linkage between the spacer and the mesogenic unit in the side chain
André Laschewsky and Didier Cochin	891	Synthesis of homopolymers and copolymers of bulky fumarates, and their spreading behaviour in insoluble monolayers

Mila Cortázar, José I. Eguiazábal and Juan J. Iruin	901	Interchange reactions in poly(ethylene terephthalate)/poly(hydroxy ether of bisphenol A) blends: effect on thermal behaviour
Po-Hou Sung and Wen-Guey Wu	905	Graft copolymer networks of polyurethane and epoxy structures—I. Dynamic mechanical properties
Fernanda M. B. Coutinho and Maria Ines P. Ferreira	911	Optimization of reaction conditions of bulk functionalization of EPDM rubbers with maleic anhydride
Alok Kumar Tyagi, Veena Choudhary and I. K. Varma	919	Effect of reactive diluent (MMA) on properties of urethane methacrylates
K. J. Scariah, V. Sekhar and M. Rama Rao	925	Thermal degradation behaviour of copolyurethanes based on hydroxy terminated polybutadienes and its hydrogenated analogs: thermogravimetric and pyrolysis-g.c. studies
N. K. Kalfoglou and D. S. Skafidas	933	Compatibility of blends of poly(ethylene terephthalate) with the ionomer of ethylene–methacrylic acid copolymer
Min-Hua Feng, Leen van der Does and Adriaan Bantjes	941	Iron(III) chelating resins—IV. Crosslinked copolymer beads of 1-(β-acrylamidoethyl)-3-hydroxy-2-methyl-4(1H)-pyridinone (AHMP) with 2-hydroxyethyl methacrylate (HEMA)
S. Tadlaoui, R. Granger and J. M. Vergnaud	949	Correlation between the state of cure of a thermoset resin and its hardness
Bert Klumperman and Gea Vonk	955	Solvent effects on the copolymerization of styrene with maleic anhydride: determination of apparent reactivity ratios from the penultimate unit model
Thierry Hamaide	961	On the linearization of the free-volume laws in the solid polymer electrolytes field
M. M. Salunkhe, P. P. Wadgaonkar and A. D. Sagar	967	Borohydride exchange resin; selective removal of the acetyl groups from aryl acetates
C. N. Caşcaval	969	Thermal degradation of *p*-nonylphenol formaldehyde epoxy resins
Zhang Linxi	975	Effects of pore structure on the dynamics of lattice models for polymer chains
Masahiro Imaizumi, Hitoshi Kubota and Yasuo Hata	979	Comparative examination of acrylic acid and 4-vinylpyridine monomers in liquid-phase photografting on polyethylene film
Eugene Papirer, Jean-Marc Perrin, Gerard Nanse and Philippe Fioux	985	Adsorption of poly(methylmethacrylate) on an α alumina: evidence of formation of surface carboxylate bonds
S. M. Lee, C. H. Choi and B. K. Kim	993	SAN blends with a phenoxy polymer: morphology and properties

NUMBER 9

J. Wei and J. Leonard	999	Metathesis polymerization of cyclopentene: microstructure of the polymer

Contents

Franco Cataldo	1007	Photochemical polymerization of acetylene in water suspension. A study of the resulting photopolymer in comparison with thermally aged linear polyacetylene
M. O. David et T. Q. Nguyen	1013	Membranes par mélange de polymères—I. Morphologie
Valéria Gonçalves Costa and Regina Célia Reis Nunes	1025	Mechanical properties of blends of EPDM with NR-cellulose II system
M. Camps et A. Jebri	1029	Halogenation du polystyrene—V. Régiosélectivité de l'iodation du polystyrène par le mélange I_2–HIO_3–H_2SO_4
H. Ibrahim Ünal, Colin Price, Peter M. Budd and Richard H. Mobbs	1037	Block copolymers of isoprene and tertiary butyl acrylate: synthesis, characterization and micelle formation
O. Chiantore, P. Cinquina and M. Guaita	1043	Fractionation and molecular characterization of EPDM rubbers
A. Priola, R. Bongiovanni and G. Gozzelino	1047	Solvent influence on the radical grafting of maleic anhydride on low density polyethylene
Marc J. M. Abadie et Michel Rouby	1051	Etude de la photoréactivité de composites dentaires—2. Comparaison entre différents composites
M. F. V. Marques and F. M. B. Coutinho	1055	Copolymerization of ethylene and butadiene with a Ziegler catalyst based on $MgH_2/TiCl_4$
Jeh-Chung Tang and Teh-Chou Chang	1059	Study on thermotropic liquid crystalline polymers—I. Synthesis and properties of poly(azomethine-urethane)s
Toshio Hayashi, Eiji Nakanishi, Yasuko Iizuka, Masanao Oya and Makoto Iwatsuki	1065	Biodegradation of copoly(N-hydroxypropyl-D,L-glutamine) *in vitro*
Catalina Constantin and Bogdan C. Simionescu	1071	Influence of inter- and intramolecular contacts on the second virial coefficient
M. Seno, Y. Kiso, H. Tanaka and T. Sato	1075	Postpolymerization by using long-lived poly(di-2-ethylhexyl itaconate) radicals in the gel formed by (R)-12-hydroxystearic acid
Soon Kil Kwon and In Jae Chung	1081	Influence of annealing on the spun fiber properties of thermotropic liquid crystalline polyesters with flexible units in a main chain
Maria I. B. Tavares, Elisabeth E. C. Monteiro, Robin K. Harris and Alan M. Kenwright	1089	NMR study of plasticized PVC
Erratum	I	

NUMBER 10

Paul G. Brown and Kiyohisa Fujimori	1097	A stereochemical study of citraconic anhydride units in copolymers of styrene with citraconic anhydride via ^{13}C-NMR spectroscopy
I. Janigová and I. Chodák	1105	Temperature effect on kinetics of isothermal crystallization of crosslinked filled LDPE—1. Particulate silica with low surface area as a filler

Jari Koivumäki and Jukka V. Seppälä	1111	Copolymerization of ethene and propene in liquid propene with $MgCl_2/TiCl_4$, $VOCl_3$ and Cp_2ZrCl_2 catalyst systems—a comparison of products
Y. T. Yeo, S. Y. Lee and S. H. Goh	1117	Miscibility of poly(2-cyanoethyl methacrylate) with various polymethacrylates
Antonino Valenza and Domenico Acierno	1121	Ternary blends of nylon 12/polypropylene/modified polypropylene: influence of functional groups of the modified polypropylene
C. H. Bamford	1127	Non-stationary states in free-radical polymerizations with size-dependent termination. Studies by the group-termination procedure—3. Further consideration of after- and pre-effects and evaluation of absolute coefficients
P. P. Lizymol and Sabu Thomas	1135	Binary polymer systems—interactions in solutions and their relationship to solid state compatibility
M. Fontich, P. Fors, M. L. Sese and F. R. Trull	1143	Polymer bound pyrrole compounds, VIII. Water-soluble pyrrole pigments carrying polyether side chains
C. R. G. Furtado, R. C. R. Nunes and A. S. de Siqueira Filho	1151	Evaluation of mica-filled styrene butadiene rubber
V. Gueguen, L. Audouin, B. Pinel and J. Verdu	1157	General and kinetic aspects of radiochemical and thermal oxidation of a chlorosulfonated polyethylene
K. Darragas, G. Groeninckx, H. Reynaers and C. Samyn	1165	Miscibility of blends of LC polyesters and blends of polybutylene terephthalate with LC polyester
Paolo Corradini, Claudio De Rosa, Gaetano Guerra, Roberto Napolitano, Vittorio Petraccone and Beniamino Pirozzi	1173	Conformational and packing energy of the crystalline α modification of syndiotactic polystyrene
M. Bankova, N. Manolova and I. Rashkov	1179	Poly(ϵ-caprolactone)s with 5-nitro and 5-chloro–8-quinolinoxyl end-groups
Nihan Nugay, Claude Hosotte, Turgut Nugay and Gerard Riess	1187	Anionic synthesis of poly(methylmethacrylate)-poly(4-vinylpyridine) diblock copolymers in the presence of LiCl
Hsien-Tang Chiu and Dao-Shinn Hwung	1191	Miscibility study on polyphenylene oxide and SBS triblock copolymer blends
A. Cherdoud-Chihani et M. Mouzali	1197	Réticulation DGEBA–copolymères acide acrylique-styrène et anhydride maléique-styrène
Announcement	I	

NUMBER 11

H. J. Kim, W. R. Jackson and G. P. Simon	1201	The effect of the spacer group on side-chain liquid crystal polymer dielectric mobility
Jin-San Yoon, Chung-Yul Chung and In-Hyun Lee	1209	Solubility and diffusion coefficient of gaseous ethylene and α-olefin in ethylene/α-olefin random copolymers

Christine Damas, Alain Brembilla, Francis Baros, Marie-Laure Viriot and Pierre Lochon	1215	Synthesis and behaviour study of amphiphilic polyvinylimidazolium salts in aqueous media: effects of the microdomains on a bimolecular reaction involving hydrophobic reactants
X. Godoy, E. Abuin, E. Lissi and A. Leon	1223	Photophysical study of poly-(methyl methacrylate) containing indolic groups
Hong-Quan Xie, Xu-Dong Huang and Gui-Gui Wang	1227	Electronic–ionic conducting interpenetrating polymer networks based on (castor oil–polyethylene glycol) polyurethane and poly(vinyl pyridine)
Y. Morita, Y. Sugahara, A. Takahashi and M. Ibonai	1231	Preparation of chitin-*p*-toluenesulfonate and deoxy(thiocyanato) chitin
Ramón Vilar, Roberto Salcedo, Ruben Gaviño and Takeshi Ogawa	1237	Polymerization of phenylacetylene with di-μ-pentafluorothiophenolate bis (1,5-cyclooctadiene) rhodium (I) and its analogues
Huiping Hu and Deben Chen	1243	Studies on the photoreaction of polysilanes by fluorescence spectroscopy
Frank Heatley, Ga-Er Yu, Jane Lawrance and Colin Booth	1249	Analysis of the ^{1}H and ^{13}C NMR spectra of poly-(*t*-butyl-ethylene oxide) and of block and statistical copolymers of *t*-butyl-ethylene oxide and ethylene oxide
W. Ken Busfield, Ian D. Jenkins and Kirstin Heiland	1259	Free radical initiation mechanisms in the polymerisation of diethyl fumarate and diethyl maleate studied by the nitroxide trapping technique
Bibekanada Das, Debabrata Chakraborty and Asok Hajra	1269	Epoxy resin/poly(ethyl acrylate)—interpenetrating polymer networks: engineering properties and morphology
Minoru Nagata and Tsuyoshi Kiyotsukuri	1277	Biodegradability of copolyesteramides from hexamethylene adipate and hexamethyleneadipamide
Pascale Benoist et Gilbert Legeay	1283	Traitement de surface d'un polyurethane par plasma froid: fixation de fluor
William J. Davies and Richard A. Pethrick	1289	Positron annihilation lifetime and Doppler broadening studies of amorphous fluoropolymer-poly (2,2-bis trifluoro 4,5 difluoro 1,3-dioxole)
Hyun Joon Kim and Luiz Claudio de Santa Maria	1295	Polymerization of ethylene and propylene with homogeneous titanocene catalysts modified by trimethylsilanol
H.-J. Timpe, S. Ulrich, C. Decker and J.-P. Fouassier	1301	Acridinium salt mediated photopolymerization of acrylates and methacrylates with dihydropyridine–iodonium salt combinations
L. A. Rishina, E. I. Vizen, L. N. Sosnovskaja and F. S. Dyachkovsky	1309	Study of the effect of hydrogen in propylene polymerization with the $MgCl_2$-supported Ziegler–Natta catalyst—part 1. Kinetics of polymerization
E. I. Vizen, L. A. Rishina, L. N. Sosnovskaja, F. S. Dyachkovsky, I. L. Dubnikova and T. A. Ladygina	1315	Study of hydrogen effect in propylene polymerization on (with) the $MgCl_2$-supported Ziegler–Natta catalyst—part 2. Effect of CS_2 on polymerization centres
Mária Omastová, Stanislav Košina, Milan Lazár and Stanislav Balúch	1319	Study on the influence of water on the electrochemical preparation and conductivity of polypyrrole films and porous layers

P. Coussot-Rico, G. Clarotti, A. Ait Ben Aoumar, A. Najimi, J. Sledz, F. Schue et R. Quatrefages 1327 Relation entre l'énergie de surface de membranes à base de polyhydroxyalkanoates et l'adsorption des protéines sur ces mêmes membranes

Short Communications

P. M. Fritz, Q. Q. Zhu and W. Schnabel 1335 Formation of aldehyde groups during the photolysis of poly(methyl methacrylate)

Simona Morariu and Bogdan C. Simionescu 1339 On the polymerization of 2-(2′,4′-dichlorophenyl)-4-methylene-1,3-dioxolane

M. Hassanein 1345 Cationic polymer colloid for promotion of nucleophilic displacements in aqueous medium

NUMBER 12

A. Larrínaga, E. M. Elexpuru, L. M. León, J. M. G. Cowie and I. J. McEwen 1347 The copolymerisation of 2,4-dicyanobut-1-ene with N-vinyl carbazole

K. Tharanikkarasu and Ganga Radhakrishnan 1351 A novel polyurethane macroinitiator for free radical polymerization

J. I. Chen, S. Marturunkakul, Y. M. Chen, R. J. Jeng, J. Kumar and S. K. Tripathy 1357 A relaxation study of poled nonlinear optical polymers by infrared reflection–absorption spectroscopy

Y. Yong Tan and Gert O. R. Alberda van Ekenstein 1363 (2,6-Diphenyl) phenyl methacrylate—2. Radical copolymerization with methyl methacrylate. The T_gs of its copolymers with an addendum on the polymerization of (2,6-diphenyl) phenyl acrylate

Paul F. Cheetham and Brian J. Tabner 1367 A high-field ^{13}C-NMR study of the aqueous copolymerisation of acrylonitrile and vinyl acetate. Microstructural observations

A. G. Theodoropoulos, I. C. Konstantakopoulos and G. N. Valkanas 1375 Synthesis of "block order" networks based on styrene–ethylene–butylene ABA triblock copolymer

V. L. Rao and P. Sivadasan 1381 Synthesis and properties of polyether ketones

J. C. Milano, A. Louakfaoui, B. Fache et J. L. Vernet 1389 Synthèse de nouveaux polyesters insaturés styréniques à partir de diols isomoléculaires à ponts thio-éthers. Étude par RMN et tenue thermique

Ryuichiro Yoda, Yoshitsugu Hirokawa and Toshio Hayashi 1397 Synthesis and molecular characterization of A–B–A type block copolymer consisting of poly(γ-benzyl L-glutamate) as the A component and polyisoprene as the B component

John A. Mikroyannidis 1403 Cyano-substituted polyamides and polyimides prepared from 2,6-bis(3-aminobenzylidene)-1-dicyanomethylene-cyclohexane

V. Švorčík, V. Rybka, I. Míček, V. Popok, O. Jankovskij, V. Hnatowicz and J. Kvitek 1411 Structure and properties of polymers modified by ion implantation

G. S. Georgiev and I. G. Dakova 1417 Study of radical methyl methacrylate–methacrylic acid copolymerization in isopropyl alcohol by dynamic laser scattering and ^{13}C-NMR spectroscopy

N. Somanathan and R. Sanjeevi 1425 Effect of temperature on the mechanical properties of casein-g-poly(acrylonitrile) films

Contents

Mustapha Majdoub, André Loupy et Guy Flèche	1431	Nouveaux polyéthers et polyesters à base d'isosorbide: synthèse et caractérisation
Xi Xu, Weiwei Xiao and Keqiang Chen	1439	Morphology and crystallinity of particles formed from dilute solutions of poly(vinyl alcohol-b-acrylonitrile), poly(vinyl alcohol) and polyacrylonitrile
Liming Dai and J. W. White	1443	Iodine-induced uncoiling of polyisoprene random coils in solution
F. Danusso, M. Levi, G. Gianotti and S. Turri	1449	End unit effect on the T_g of differentiated series of perfluoro-poly(oxymethylene-co-oxyethylene) oligomers
Ida Gyöngyhalmi, Tamara Földes-Berezsnich and Ferenc Tüdős	1457	Kinetics of radical polymerization, LVI. Investigation of the effect of molecular inhibitors on the radical polymerization of p-methyl-styrene. C-nitroso compounds
L. N. Andreeva, A. P. Filippov, V. N. Tsvetkov, V. V. Zuev, S. S. Skorokhodov, R. Zentel and H. Poths	1461	Elastic deformations in a magnetic field of a liquid-crystalline polymer with mesogenic groups in the main and side chains
Kyung-Jun Chu, Ho-Sik Chang and Son-Ki Ihm	1467	Effects of diethyl aluminum chloride (DEAC) addition to the catalysts prepared by reduction of $TiCl_4$ with EtMgCl on ethylene–propylene copolymerization
Ahmad Saadati, Christian Larchet et Bernard Auclair	1473	Adoucissement des eaux calciques par échange d'ions transmembranaire à travers des membranes homogenes obtenues par greffage radiochimique
Jean-Pierre Tancrez, François Rietsch et José Pabiot	1479	Caractérisation des longueurs de fibres dans différents types de composites polypropylène-fibres de verre courtes—2ème partie. Etude des matériaux après injection
H. T. Cunha and C. M. F. Oliveira	1489	Copolymerization of poly(propylene oxide) methacrylate macromonomer with styrene
Y. Q. Zhu, Y. J. Huang, Z. G. Chi and H. J. Shen	1493	Studies on the relationship of structure and properties of the polyesterurethanes adhesives
Announcement	i	